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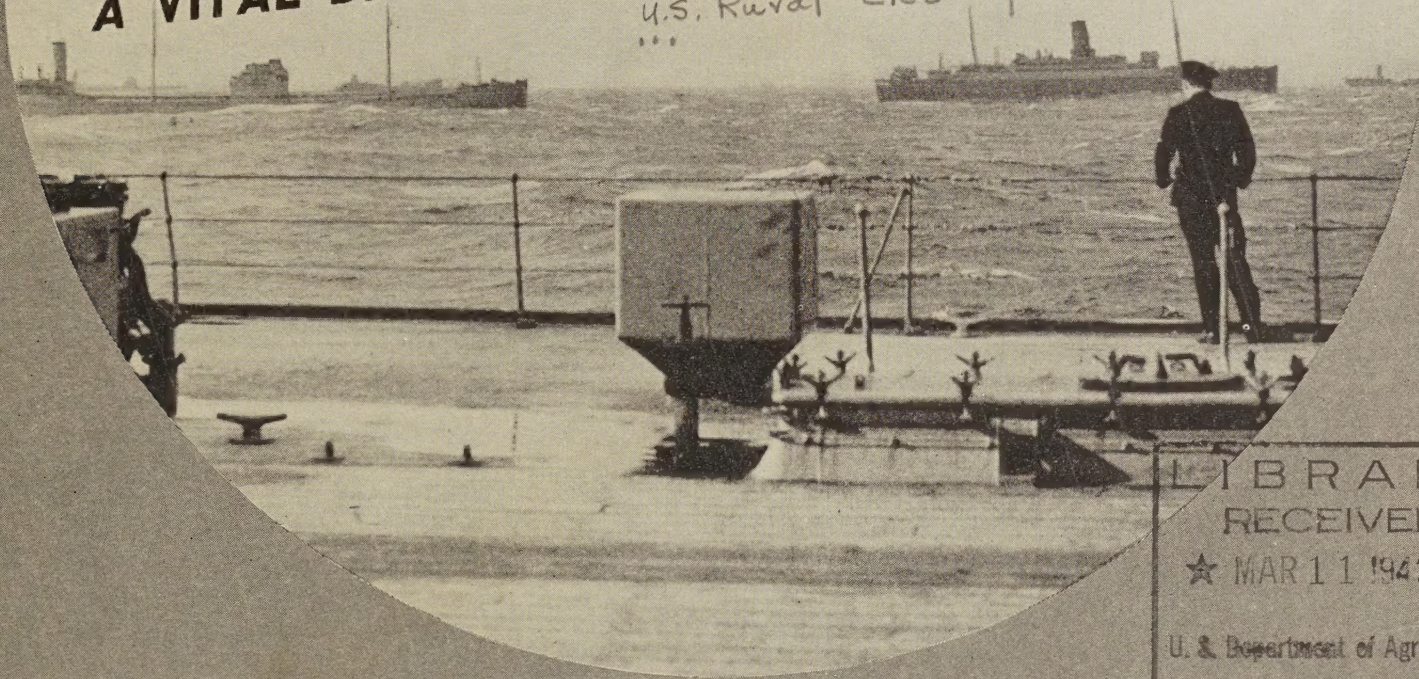
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A VITAL DIVISION IN THE BATTLE OF FOOD

U.S. Rural electrification administration



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U. S. Department of Agriculture

In the Battle of Food, milk and milk products form an important division. Shut off by war from their normal supplies, the British look to us for powdered milk and cheese. Our own armed forces in training need vital milk substances for rugged nerves and bone and muscle. Millions of workers in defense factories throughout the land require milk for maximum efficiency and endurance. Increasing demands have been answered by valiant productive efforts of American dairy farmers. But the need is ever greater. Production cannot, must not fall off this winter. But time is short. We cannot wait to increase milk supplies by increasing the size of herds. Greater production must come from better management of existing herds and better conservation of milk now wasted because of spoilage or fed to livestock. In producing and conserving milk, electricity on the farm goes to work for defense.



AN ABUNDANCE OF WATER.—Today's pure milk standards make a pressure water system almost an absolute necessity on the dairy farm. Frequent hosing of the milk house and milking barns, water for sterilizing equipment, and plenty of good drinking water for the cows may be had with an electric pump and pressure water system. Experiment station reports show that cows with individual, automatic water bowls will produce up to 4 percent more milk than cows watered twice a day, up to 11 percent more than cows watered once a day. The difference in production is even greater during the cold weather months.

DEATH TO BACTERIA.—The bacteria which sour milk and spoil flavor grow rapidly in unsterilized dairy utensils. Electric heat for hot water and sterilizers is fundamental to good management. Maximum milk and cream prices imply clean utensils, washed after milking in HOT water. Cold-water washing leaves milk solids on the equipment in which contaminating bacteria thrive. Only a thorough scrubbing with HOT water and washing powder will get them clean. The automatic electric sterilizer is additional safeguard against bacteria growth. Washed utensils are stacked in the cabinet while still wet. The switch is turned on. When the temperature rises to the proper point, a thermostat turns off the current. Utensils are left in the sterilizer until they are used again. They remain dry, rustless, and free from bacteria.

ELECTRIC COOLING STOPS WASTE.—Sixty percent of the producing cows in the United States are in herds of 10 cows or less, yet only 22 percent of the milk from these cows is sold in fluid milk. Here is the most logical source of greater production, especially by preventing waste and spoilage with electric cooling. There can be no comparison between electric cooling and ice either in convenience or cost. Electric milk cooling is the most effi-



cient cooling method. Milk is cooled quickly and the low temperature is maintained at a few cents per day. REA has encouraged manufacturers to build a one-can electric cooler for small producing farms. With this equipment the man with no more than two or three cows can sell fluid milk at a profit.

HOME-GROWN, HOME-GROUND FEEDS.—Increasing milk production through feeding is a major problem of farm management. With electric grinding, chopping, and mixing equipment the feed problem disappears. Feeds of equal or better quality than commercial mixtures may be prepared right on the farm using home-grown grains at considerable savings in cost. Hay and ensilage also may be cut and stored electrically at low cost. An automatic electric feed grinder saves time-consuming trips to the mill and promotes substitution of properly ground grain for unground grain. Electric mixing is easier and quicker than hand mixing and the mixture is more uniform. It is a simple matter to add concentrates to the mixture for any desired feeding formula.

FRESH AIR PREVENTS DISEASE.—When we consider that a healthy, producing cow requires almost 4,000 cubic feet of fresh air per hour, the importance of winter ventilation in the dairy barn is obvious. However, there are other requirements in ventilating the barn that are fulfilled by electric forced ventilation. Each cow will give off into the air about 16 pounds of moisture per day. The new air should be dry to carry off this moisture and prevent condensation on the walls and ceiling. In addition, the temperature should be uniform since sudden changes in air temperature invite pneumonia and other diseases and cut milk production. Electric ventilating fans are easily installed and the small operating cost is more than made up in healthier cattle and more milk.

Labor Saving with Electricity



Convoy photo—British official war photo from O. E. M.

With electricity each man's work goes farther. This is especially true in dairy farming. As our defense program swings into high with its terrific raids upon the available labor supply, electricity on the farm will replace manpower in many types of work. On dairy farms milking from 35 to 50 cows, milking machines alone will save the entire time of one man. On farms with no more than 10 or a dozen producing cows, milking machines in conjunction with other uses of power will save a man's time. For example, with hot water available there is no problem at all in caring for milking machines. Immediately after milking, cold water is run through the machine, followed by hot water to remove all remaining milk solids. The machine is then placed on the solution rack until the next milking. An electric separator will run without attention while the milking continues. When this is done milk does not have to be rewarmed before separating. Electric feed grinding with a home-built automatic feed saves time spent in sacking and trips to the mill. Electric cooling is a timesaver on farms using ice.

EQUIPMENT PRIORITIES AND FINANCING. Electric farm equipment is built of the same materials used in constructing fighting planes, tanks, and munitions. Those in charge of our defense program know, however, the importance of maintaining farm production. Hence, vital farm equipment, including electrical equipment, is high on the priorities list of manufactured goods. The necessity to reduce demand and consumption for nonessential products, especially those requiring metals, has led to revision of financing and installment buying plans. REA will cooperate in this program in its financing of farm and home equipment. Your cooperative superintendent will have full details concerning types of equipment to be financed and the terms.

Rural Electrification Administration—U. S. Department of Agriculture